Instructions for Using The Learning and Technology Framework





The following charts enable school decision makers to use the Technology Effectiveness Framework. Completing them will help you identify your goals in the effective use of technology to increase engaged learning.

Tables I and II cover *Current Realities and Future Goals*. By following the instructions that accompany them, you can graphically depict the learning and technology practices and policies that are in place now in your classroom, school, or district against your vision of learning and technology for the future. This information can help you decide where to invest additional resources or where to strengthen your present school practices and policies.

Table III, *Comparing Technology Programs*, is a step-by-step guide to examining technology programs according to features that contribute to engaged learning and high technology performance.

Tables I and II: Current Realities and Future Goals

You will be using two tables and a grid to compare your current practices and future goals. Table I asks you to reflect on the 26 indicators for engaged learning described in this document, ranking your current and desired practices and policies for each indicator on a scale from 0 through 3. Table II asks you to rank your current and desired practices and policies for each of the 22 indicators of high technology performance.

- Practice scores reflect what is actually in place in classrooms and schools now and where you want to see growth.
- *Policy* scores refer to what your school or community thinks is important now and where you think there is a need for more emphasis in the future. For an indicator to be part of current policy, it must appear in some kind of policy document such as a mission statement, curriculum framework, assessment system, building organization plan, or some other plan that has been accepted in a school or community.

Finally, plot your scores on Graph 1. This will show you where your school is now in terms of ideal engaged learning and high technology performance and how close your school's vision of the future is to that ideal.

Completing Table I

Current Realities in Engaged Learning. In the first two boxes next to each engaged learning indicator, score your school's current learning practices and policies. When you have filled in all your scores in the first two columns, add them up and write the totals in the column totals boxes at the bottom.

NBC 4	Engaged Learning Practices	Engaged Learning Policies		
AL DUN	0 = Not in place at this time	0 = Not in place		
- All A	1 = Some users/teachers exploring/piloting/developing	1 = Not so important		
2 = Many users/teachers have good skills in these areas;		2 = Somewhat important		
	practice is effective	3 = Very important		
	3 = Most users/teachers have mastery, and practice is very widespread;			
	it is a major strength for the school			
 1 = Some users/teachers exploring/piloting/developing 2 = Many users/teachers have good skills in these areas; practice is effective 3 = Most users/teachers have mastery, and practice is very wides it is a major strength for the school 		1 = Not so important2 = Somewhat important3 = Very important		

Future Goals in Engaged Learning. Refer to your scores in the Current Realities boxes to determine your scores for Future Goals. Look for imbalances between your practice scores and your policy scores to identify priorities for future growth. For example, if you marked a 3 in both the policy and practice box of the "responsibility for learning" indicator, students in your school are already achieving this important policy goal and you are better off putting your emphasis elsewhere. A policy score of 3 and a practice score of 0 or 1 on the same indicator clearly shows an imbalance, as does a practice score of 2 and a policy score of 1.

Next, decide how important each imbalance is to improving practice in your school. Fill in the boxes opposite those indicators where you think your school or district should concentrate on growth using the scale below. Do the same thing in the policy column. When you have filled in all of your scores, add them up and write the total in the column totals box.



Future Goals

0 =not a priority for improvement at this time/not being considered

1 = will concentrate on improvement but a low priority

- 2 = will concentrate on improvement, medium priority
- 3 = will concentrate on improvement and high priority

Table I: Current Realities & Future Goals in Engaged Learning Practices & Policies
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Engaged Learning	Current	Realities	Future Goals		
Indicators	Practice	Policy	Practice	Policy	
Vision of Learning Responsible for learning Strategic Energized by learning Collaborative					
Tasks Authentic Challenging Multidisciplinary					
Assessment Performance-based Generative Seamless and ongoing Equitable					
Instructional Model Interactive Generative					
Learning Context Collaborative Knowledge-building Empathetic					
Grouping Heterogeneous Equitable Flexible					
Teacher Roles Facilitator Guide Co-learner/Co-investigator					
Student Roles Explorer Cognitive apprentice Teacher Producer					
Column Totals					
Grand Totals					

Completing Table II

Current Realities in High Performance Technology. In the first two boxes opposite each high technology performance indicator, score your school's current technology practices and policies using the scale below. When you have filled in all your scores, add them up and write the totals in the column totals box at the bottom.

N3/ 11	High Performance Technology Practice	High Performance Technology Policies
TEG	0 = Not in place at this time	0 = Not in place
100 Mar 195	1 = Some users/teachers have equipment and are	1 = Not so important
	exploring/piloting/developing	2 = Somewhat important
	2 = Many users/teachers have good computer and technology	3 = Very important
	skills and are actively engaged with the technology	
	3 = Most users/teachers have mastered complex technologies	
	(hardware and software) and effectively use technology to promote	
	engaged learning; is a major strength in the school or district	

Future Goals in High Performance Technology. Determine your Future Goals scores for technology practice and policy in the same way you determined Future Goals in Table I. Refer back to the Current Practices columns and identify the imbalances between technology practices and policies. Then decide which imbalances are the most important to bring into alignment. Mark the practice and policy columns of each indicator, using a scale of 1 for low priority and 3 for high priority.

In deciding where to place your technology priorities, also take practicality into account. Be realistic about what your school or district can afford at this time. Also, if your school, district, or state is developing a new technology plan or policy, you may want to put off investing in some areas until you know more about those plans. When you have filled in all your scores, add them up and write the total in the column totals boxes at the bottom.

Table II: Current Realities and Future Goals in High Performance Technology

High Performance	Current Realities		Future Goals		
Technology Indicators	Practice	Policy	Practice	Policy	
Access Connective Ubiquitous Interconnective Designed for equitable use					
Operability Interoperable Open architecture Transparent					
Organization Distributed Designed for user contributions Designed for collaborative projects					
Engagability Access to challenging tasks Enables learning by doing Provides guided participation					
Ease of Use Effective helps User friendliness/user control Fast Available training and support Provides just enough information just in time					
Functionality Diverse tools Media use Promotes programming and authoring Supports project design skills					
Column Totals					
Grand Totals			I		

Plotting Graph 1

Plotting Current Realities. Add your Current Realities *practice* and *policy* scores for *engaged learning* and enter the total in the Grand Totals box. Draw a solid vertical line on the horizontal learning axis to indicate the grand total. Then add your Current Realities *practice* and *policy* scores for *technology performance* and enter the total in the Grand Totals box. Draw a solid horizontal line on the vertical technology performance axis to indicate the grand total.

Mark the intersection of the horizontal and vertical solid lines as point A. This indicates where your school or district is currently with regard to using high performance technology to enhance engaged learning.

Plotting Future Goals. Add your Future Goals *policy* and *practice* scores for *engaged learning* and enter the total in the Grand Totals box. Then add the Future Goals grand total to the Current Realities grand total for engaged learning and draw a vertical dashed line on the horizontal learning axis to indicate the new total.

Add your Future Goals *policy* and *practice* scores for *technology performance* and enter the total in the Grand Totals box. Then add the Future Goals grand total to the Current Realities grand total for technology performance and draw a dashed horizontal line on the vertical technology performance axis to indicate the grand total.

Mark the intersection of the two dashed lines as point B. This indicates where your school or district will be with regard to using high performance technology to enhance learning if you were to implement your desired goals.

Notice which quadrant your two intersections fall into. Point A indicates whether your current practices and policies are at the high end of engaged learning and high technology performance (Quadrant A) or at the low end (Quadrant D). Or perhaps they are somewhere in between (Quadrants B or C). Point B tells you where your school or district's goals fall in relation to the ideal of high engaged learning and high technology performance.





Graph 1: Current Realities and Future Goals

Table III: Comparing Technology Programs

The table in this section helps you compare technology and technology-enhanced programs in promoting engaged learning. You will be able to evaluate programs as they were designed and as they actually perform in practice. First, complete the two charts in Table III — one for engaged learning indicators (chart 1) and one for high performance technology indicators (chart 2) — and then use your scores to plot the program profiles in Graph 2.

For each program, you will be placing two numbers opposite each indicator in each chart. The first number refers to features that are present in the design of the technology or technology-enhanced program, as stated in formal descriptions of the program such as articles, profiles, and promotional materials. Place this number in the Design column for each indicator in each chart.

Sometimes there is a discrepancy between what the manual or description says about a given technology or program and what teachers who actually use it say it does. The second column, marked Practice, allows you to evaluate this aspect of the technology. To fill in this column, you will need to talk to teachers who have used the technology in the classroom or attend demonstrations of the technology. Place this number in the Practice column for each indicator in each chart.



Design Scores for Learning and Technology

- 0 =Not in place at this time/not applicable
- 1 = Design definition in place but feature in program falls short of potential stated in the definition (e.g., program has an encyclopedia for students to explore but it is of very poor quality)
- 2 = Design definition in place and corresponds clearly to one or more features in the program (e.g., program has an encyclopedia and it is functioning as described in literature but it is not outstanding)
- 3 = Design definition in place and is a major appeal of the program (e.g., program has an encyclopedia and it is a major strength of the program)

Practice Scores for Learning and Technology

- 0 = Not in place at this time/not applicable
- 1 = Feature in place with no data to support
- 2 = Feature clearly in place but only preliminary or limited data available
- 3 = Strong empirical evidence that this feature of the program is in place and effective

When you have filled in all your scores, add each column and write the total for each at the bottom of the column. You are now ready to compare the two programs on the graph.

Table III: Comparing Technology Programs

Chart 1				
Engaged Learning	Program A		Program B	
Indicators	Design	Practice	Design	Practice
Vision of Learning Responsible for learning Strategic Energized by learning Collaborative				
Tasks Authentic Challenging Multidisciplinary				
Assessment Performance-based Generative Seamless and ongoing Equitable			 	
Instructional Model Interactive Generative				
Learning Context Collaborative Knowledge-building Empathetic				
Grouping Heterogeneous Equitable Flexible				
Teacher Roles Facilitator Guide Co-learner/Co-investigator				
Student Roles Explorer Cognitive apprentice Teacher Producer				
Column Totals				
Grand Totals				

Chart 2				
High Performance	Program A		Program B	
Technology Indicators	Design	Practice	Design	Practice
Access Connective Ubiquitous Interconnective Designed for equitable use				
Operability Interoperable Open architecture Transparent				
Organization Distributed User contributions Collaborative projects				
Engagability Access to challenging tasks Enables learning by doing Guided participation				
Ease of Use Effective helps User friendliness/control Fast Available training & support Provides just enough information just in time				
Functionality Diverse tools Media use Promotes programming and authoring Supports project design skills				
Column Totals				
Grand Totals				

Plotting Graph 2

Program A. Using Table III column totals, add the Design and Practice columns for Program A in chart 1 and enter the total in the Grand Totals box. Then add the Design and Practice columns for program A in chart 2, again entering the total in the Grand Totals box.

With grand totals for engaged learning and technology performance of Program A, you are ready to plot each total on the graph. Plot the grand total for engaged learning on the horizontal learning axis by drawing a vertical line. Plot the total for technology performance on the vertical technology performance axis by drawing a horizontal line. Mark the intersection of the two lines with an "A" to indicate the overall effectiveness of program A.

Program B. Plot Program B in the same way as Program A — adding each column and plotting engaged learning with a vertical line on the horizontal axis and plotting technology performance with a horizontal line on the vertical axis. Mark the intersection of the two lines with a "B" to indicate the overall learning effectiveness of Program B.

Comparing points A and B will indicate which technology will be most effective in your classroom.





Graph 2: Comparing Technology Programs

We encourage readers to remove this section and duplicate it for use in group planning sessions.